

---

## M002: TENT AND STOVE DRILL

---

<b>TSP Number/Title</b>	M002: Tent and Stove Drill
<b>Effective Date</b>	Implement next class iteration upon receipt
<b>Supersedes TSP(s)/Lessons</b>	None
<b>TSP User</b>	The following courses use this TSP: Mountain Instructor Qualification Course (MIQC) Basic Mountaineering Course (BMC) Assault Climber Course (ACC)
<b>Proponent</b>	United States Army Alaska, Northern Warfare Training Center
<b>Improvement Comments</b>	<p>Send comments and recommendations on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to:</p> <p>ATTN: TRAINING ADMINISTRATOR COMMANDANT USARAK NWTC 1060 GAFFNEY ROAD #9900 FORT WAINWRIGHT AK 99703-9900</p>
<b>Security Clearance/Access</b>	Public domain
<b>Foreign Disclosure Restrictions</b>	The Lesson Developer in coordination with the USARAK NWTC foreign disclosure authority has reviewed this lesson. This lesson is releasable to foreign military students from all requesting foreign countries with Approval of Commandant USARAK NWTC.

---

## PREFACE

---

**Purpose**

This training support package provides the instructor with a standardized lesson plan for presenting instruction for:

Task Number	Task Title
V.0100.01	Pitch a mountain dome tent
V.0100.02	Strike a mountain dome tent
V.0100.03	Assemble, operate and disassemble a squad (Whisperlite™) stove

**Technique of Delivery**

Lesson Number	Instructional Strategy	Media
M002	Demonstration and Practical Exercise	None

**This TSP contains**

Table of Contents		Page
Lesson	Section I, Administrative Data	3
	Section II, Introduction	5
	TLO: Demonstrate proper set-up and use of a mountain dome tent and squad stove	5
	Section III, Presentation	6
	ELO A: Pitch a mountain dome tent	6
	ELO B: Strike a mountain dome tent	6
	ELO C: Assemble, operate, disassemble and maintain a squad (Whisperlite™) stove	7
	Appendixes	10
	Section IV, Summary	10
	Section V, Student Evaluation	10

---

**SECTION I****ADMINISTRATIVE DATA**

---

**All courses  
including this  
lesson**

Course Number	Course Title
NA	Mountain Instructor Qualification Course
NA	Basic Mountaineering Course
NA	Assault Climber Course

**Task(s) Taught  
or Supported**

Task Number	Task Title
V.0100.01	Pitch a mountain dome tent
V.0100.02	Strike a mountain dome tent
V.0100.03	Assemble, operate, disassemble and maintain a squad (Whisperlite™) stove

**Task(s)  
Reinforced**

Task Number	Task Title
N/A	N/A

**Test Lesson  
Number**

Hours	Lesson Number	Lesson Title
	M020	BMC Mountaineering Review

**Prerequisite  
Lesson(s)**

None

**References**

Number	Title	Date	Additional Information
	NWTC Mountain Operations Manual	FY04	Updated yearly
FM 3-97.6	Mountain Operations	November 2000	<a href="http://www.adtdl.army.mil/">http://www.adtdl.army.mil/</a>
FM 3-97.61	Military Mountaineering	August 2002	<a href="http://www.adtdl.army.mil/">http://www.adtdl.army.mil/</a>

<b>Student Study Assignment</b>	Read TSP M002										
<b>Instructor Requirements</b>	MIQC graduate, TAITC graduate										
<b>Additional Support Personnel Requirements</b>	None.										
<b>Equipment Required</b>	<p>Instructor Equipment:</p> <ul style="list-style-type: none"> <li>• Mountain Tent</li> <li>• Squad Stove</li> <li>• Fuel Bottle</li> <li>• White gas</li> </ul> <p>Student Equipment:</p> <ul style="list-style-type: none"> <li>• 1 Mountain dome tent per buddy team</li> <li>• Squad Stove Per buddy team</li> <li>• 2 fuel bottles per buddy team</li> <li>• Pen and notepad</li> </ul>										
<b>Materials Required</b>	<p>Instructor Materials:</p> <ul style="list-style-type: none"> <li>• NWTC Mountain Operations Manual</li> <li>• Risk Management for Mountain Operations</li> </ul> <p>Student Materials:</p> <ul style="list-style-type: none"> <li>• NWTC Mountain Operations Manual</li> <li>• Risk Management Guide for Mountain Operations</li> </ul>										
<b>Classroom, Training Area and Range Requirements</b>	Mountaineering training site large enough to facilitate 8 students working in buddy teams and SGL. Training area must be large enough to facilitate pitching 4 Dome tents and lighting 4 squad stoves.										
<b>Ammunition Requirements</b>	None										
<b>Instructional Guidance</b>	Before presenting this lesson, instructors must thoroughly prepare by studying this lesson and identified reference material.										
<b>Branch Safety Manager Approval</b>	<table border="1"> <tr> <th>NAME</th> <th>Rank</th> <th>Position</th> <th>Date</th> </tr> <tr> <td>Mark Gilbertson</td> <td>GS-09</td> <td>Training Specialist</td> <td></td> </tr> </table>	NAME	Rank	Position	Date	Mark Gilbertson	GS-09	Training Specialist			
NAME	Rank	Position	Date								
Mark Gilbertson	GS-09	Training Specialist									
<b>Proponent Lesson Plan Approvals</b>	<table border="1"> <tr> <th>NAME</th> <th>Rank</th> <th>Position</th> <th>Date</th> </tr> <tr> <td>Peter Smith</td> <td>GS-12</td> <td>Training Administrator</td> <td></td> </tr> </table>	NAME	Rank	Position	Date	Peter Smith	GS-12	Training Administrator			
NAME	Rank	Position	Date								
Peter Smith	GS-12	Training Administrator									

## M002: TENT AND STOVE DRILL

### SECTION II

### INTRODUCTION

Method of instruction: Small Group  
Type of instruction: Demonstration and Practical Exercise  
Instructor to student ratio: 1:8  
Time of instruction: 1 Hour  
Media used: None

#### Motivator

Shelters must provide protection from the elements, and furnish a means for drying wet clothing. A good stove enables soldiers to easily heat rations, melt snow, and boil water. These two items can mean the difference between unit self-sufficiency in the mountains and the requirement for a large logistical tail.

#### Terminal Learning Objective

<b>ACTION:</b>	Demonstrate proper set-up and use of a mountain dome tent and squad stove
<b>CONDITION:</b>	In a field environment, given a 1 <sup>st</sup> class terrain area, a two-person buddy team, a Mountain Dome tent, squad stove and adequate hardware and fuel
<b>STANDARD:</b>	Demonstrate proper set-up and use of a mountain dome tent and squad stove IAW the NWTC Mountain Operations Manual.

#### Safety Requirements

Ensure that students:

- Receive a risk assessment prior to movement to the training area and before practical exercises.
- Have all necessary equipment for the PE's, to include any additional equipment required by the NWTC SOP.
- Have two full canteens and drink adequate water to avoid becoming dehydrated.
- Receive a briefing on the symptoms of heat injury or cold weather injury, as appropriate.

#### Risk Assessment Level

Determined by instructor.

#### Environmental Considerations

Possible fuel spill.

#### Evaluation

Prior to the field training exercise, you must demonstrate your ability to pitch and strike the mountain dome tent, and operate the squad stove in a safe manner.

#### Instructional Lead-in

The ability to rapidly pitch a tent and put a stove into operation can be a life or death matter in a mountainous environment, especially in adverse weather conditions. Soldiers need to practice pitching and striking the mountain dome tent, and learn how to operate the squad stove to ensure their own survival and the successful completion of their mission.

---

**SECTION III****PRESENTATION**

---

**ELO A**

<b>ACTION:</b>	Pitch a mountain dome tent
<b>CONDITION:</b>	In a field environment, given a mountain dome tent
<b>STANDARD:</b>	Pitch a mountain dome tent IAW the NWTC Mountain Operations Manual.

---

## Learning Step Activity 1 - Pitching a Dome Tent

**NOTE:** When assembling the tent in high winds, ensure tent is secured to ground or held by one individual to keep it from blowing away. In high winds it's easier to put all poles into the sleeves prior to securing poles into grommets.

- a. Inspect the tent and fly:
  1. For rips and tears
  2. Insure that the zippers work
  3. Insure the grommets are there
  4. That the vents are in working order
  5. Check the Velcro. Insure the S hooks are not broken
- b. Check poles:
  1. For cracks and brakes
  2. Insure there are no major bends or deformities
  3. Check the cord inside the poles for elasticity
- c. Pitch a mountain dome tent:
  1. Put poles together.
  2. Lay Out Tent
    - a. Front door facing downwind
    - b. Close zippers
  3. Slide poles through the sleeves on the tent.
    - a. Secure poles by inserting pole pins into holes, one end at a time.
  4. Position tent in desired location (this step can be done after fly is in place).
  5. Attach fly pole to fly by use of hook/pile fasteners.
  6. Vestibule/door pole to fly.
  7. Secure fly to tent:
    - a. Hook pile tape fasteners around poles at intersections.
    - b. S-Hooks at front and rear to rings.
  8. Secure tent to ground using tent stakes, rocks, vegetation etc.

---

**ELO B**

<b>ACTION:</b>	Strike a mountain dome tent
<b>CONDITION:</b>	In a field environment, given a mountain dome tent
<b>STANDARD:</b>	Strike a mountain dome tent IAW the NWTC Mountain Operations Manual.

---

## Learning Step Activity 1 - Striking a Dome Tent

**NOTE:** In high winds keep tent secure with at least one anchor or have one person hold the tent while striking.

**NOTE:** Leave door partially unzipped to allow air to escape, and stuff the door end last

- a. To strike the tent:
    1. Remove all equipment.
    2. Remove tent anchors from the ground, and roll guy lines.
-

3. Remove tent fly from tent by undoing hook/pile fasteners and S-hooks.
4. Remove fly pole and vestibule pole and collapse.
5. Zip door on fly.
6. Stuff fly into stuff sack.
7. Collapse tent by removing poles from pins.
8. Slide poles from sleeves and collapse.
9. Place all collapsed poles together, and slide into stuff sack.
10. Stuff tent into stuff sack.
11. Place tent peg bag in stuff sack.
12. Close and tie draw string.

b. Care and Maintenance:

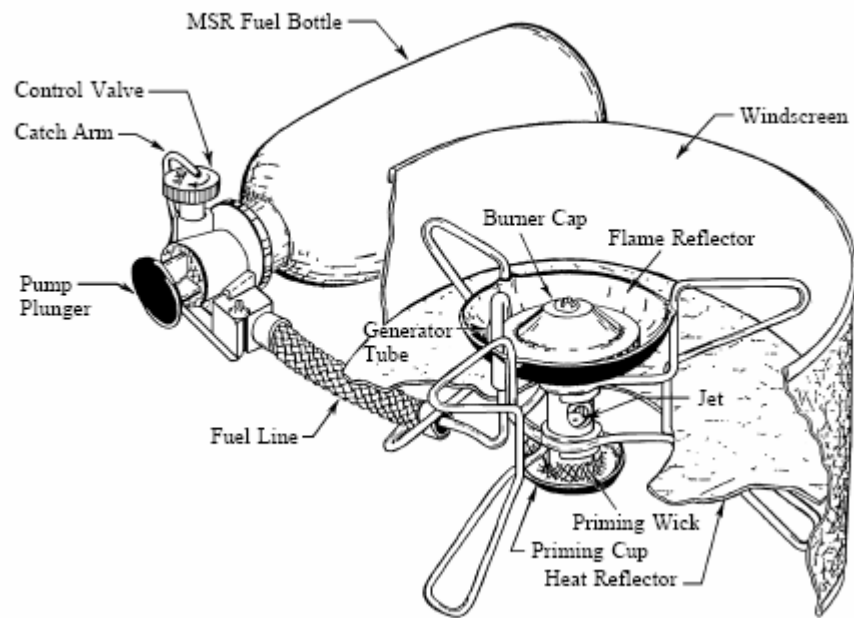
1. Dry tent prior to packing if possible.
2. Dry tent completely before storage.
3. Wash tent with sponge using mild soap.
4. Never machine wash or use harsh detergents.
5. Lubricate sticky zippers with silicone.
6. Never force a zipper with material stuck in it.
7. Do not use insect spray on tent.
8. Repair small holes with tent repair tape and seam seal.
9. Seam seal the inside of the tent floor and rain fly before use and as needed thereafter.

**ELO C**

<b>ACTION:</b>	Assemble, operate, disassemble and maintain a squad (Whisperlite™) stove
<b>CONDITION:</b>	In a field environment, given 1 <sup>st</sup> class terrain, a two-person buddy team, Whisperlite™ squad stove and adequate hardware and fuel.
<b>STANDARD:</b>	Assemble, operate, disassemble and maintain a squad (Whisperlite™) stove IAW the NWTC Mountain Operations Manual.

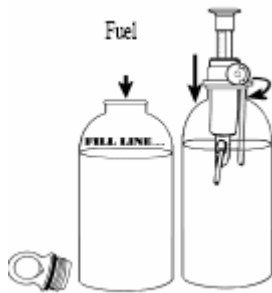
Learning Step Activity 1 - Assembling a Whisperlite™ Stove

a. As with any stove that burns fossil fuels, you must be wary of the possibility of carbon monoxide poisoning, especially when such stoves are used in small relatively airtight shelters such as snow caves or thermal shelters. Virtually all of your cooking and snow-melting tasks are accomplished using the squad stove, and one stove is adequate for the needs of from two to five soldiers. It is ideal for opening in forward or remote areas where heavy/bulky equipment could be an impediment. The squad stove is small, compact, light, and will operate on either leaded or unleaded gasoline or kerosene.

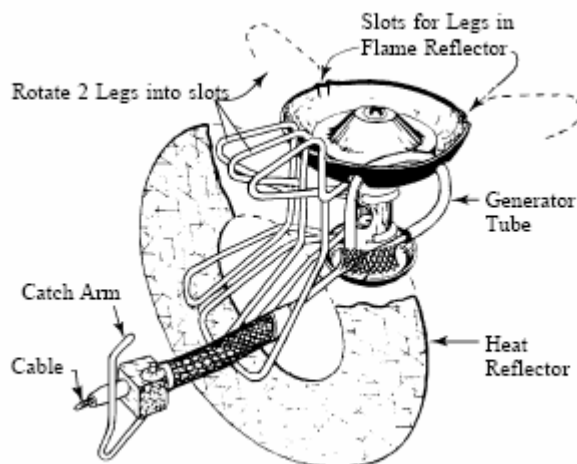


b. To assemble the Whisperlite™ stove:

1. Pour fuel into fuel bottle leaving a 2" air space at the top.



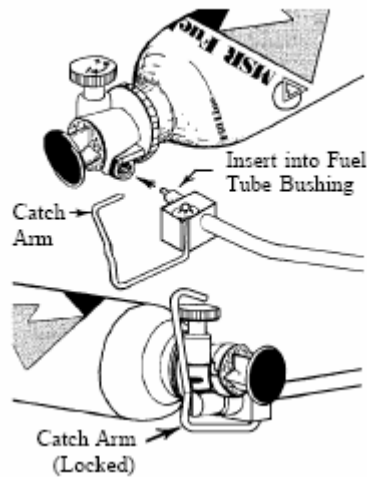
2. Screw pump snugly into the fuel bottle.
3. Pump 15-20 strokes to pressurize bottle; Do not over-pressurize the fuel bottle.
4. Unfold heat reflector and insert fuel line through center hole. Guide reflector over bottom of legs.



5. Rotate legs clockwise until they snap into the slots on the flame reflector. Do not move leg containing fuel line.
6. Insert fuel line into the fuel tube until securely seated. Swing lock latch into position so the latch is



centered on the fuel valve on the pump assembly Insert fuel line from stove into pump assembly; fuel line will only seat completely to pump assembly if turned to correct position; fuel line insertion “stop” will seat completely if mounted correctly.



7. Position stove and fuel bottle on a level, non-flammable surface.

#### Learning Step/Activity 2 - Operating a Stove

a. Do not burn stove inside tent. Keep flammable materials away from stove while operating. Keep head away from stove while lighting. Do not use stove if fuel leaks are found.

b. To operate the stove:

1. Open control valve until fuel begins to flow through the jet and moistens the burner cup and priming wick. Immediately close the control valve.
2. Light priming wick, and place windscreen around stove, (fuel valve is off).
3. Allow priming fuel to burn until flame begins to diminish.
4. Before the fuel in the primer pan stops burning, open the fuel valve slowly until the stove burner area produces a flame. Adjust to desired setting.
  - a. If the flame burns yellow, allow more time to pre-heat/prime.
  - b. If the stove goes out, allow the stove to cool before re-lighting.
5. Once stove burns with a steady blue flame, adjust valve as required.
6. Pump two or three additional pumps at a time to increase heat output when necessary. Do not over pressurize!
7. Shut stove off by turning control valve clockwise until it stops. The flame may take several seconds to die out. **DO NOT OVER-TIGHTEN CONTROL VALVE.**
9. Allow stove to cool before disassembling.

#### Learning Step/Activity 3 – Disassembly, refueling and storage

a. Close fuel valve and allow stove to cool.

b. Invert stove and attached fuel bottle onto a Hazardous Material Absorbing Pad.

c. Open fuel valve and allow pressure escape from bottle; a minimal amount of fuel will drain from the stove.

**CAUTION: IF STOVE HAS NOT COOLED SUFFICIENTLY, THE ESCAPING FUEL COULD IGNITE.**

d. When all pressure has escaped, close fuel valve.

e. Invert stove and bottle.

f. Move safety latch from position over fuel valve.

g. Carefully pull fuel line from pump assembly. Re-fill the fuel bottle and then repeat the steps for assembly and operating; or return all components to original configuration for storage, or...

#### Learning Step/Activity 4 – Operator Maintenance

a. Burner Maintenance: For the shaker jet versions, shake the stove up and down. An audible rattle should be heard – proof that the shaker jet is functioning as designed. If the rattle is not heard or you do not have a shaker jet stove, you will need to remove the jet for cleaning with the Jet Cleaning Wire.

1. Un-screw the priming cup.
2. Pull the generator tube out of the mixer tube.
3. Unscrew the jet with the Jet and Cable tool. Remove the needle and clean inside the jet.
4. Scour the fuel line. Pull the cable out of the fuel line using the Jet and Cable Tool. Wipe the cable. Push the cable in and out of the fuel line 20-30 times to scour the generator tube. Repeat scouring and wiping until clean. Reinstall cable.

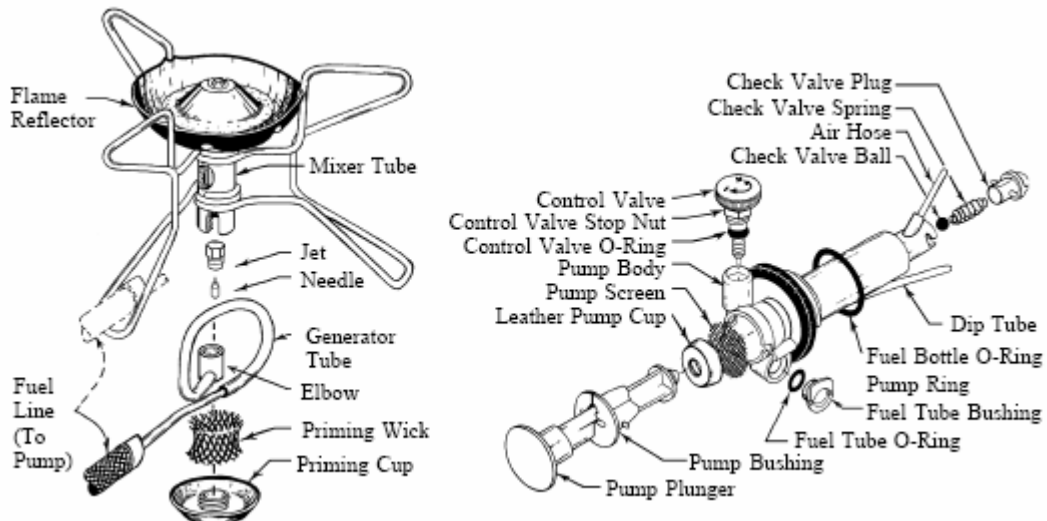
5. With the jet and needle out, flush the fuel line. Insert the fuel line into the Pump's fuel tube bushing. Open the control valve and run ½ cup of fuel through the fuel line and into a fuel container. Reassemble the stove.

b. Pump Maintenance:

1. The leather pump will need to be periodically checked and lubricated to ensure that it can pressurize the bottle. Turn the shaft of the pump plunger below the swiveling head and pull the plunger out. Saliva, chap stick or MSR Pump cup oil will all lubricate the pump cup. Rotate finger inside the pump cup to expand the diameter. Reassemble.

2. If the pump does not hold pressure in fuel bottle, clean the check valve assembly. Turn the check valve plug counterclockwise. Remove the check valve ball and spring and wipe with a cloth. Reassemble.

3. O-rings may crack or tear. If any of the O-rings are cracked, torn, or pitted they should be replaced prior to use.



---

**Check on Learning**

- a. How many strokes should be applied to the fuel pump in order to pressurize the bottle?  
15-20 strokes
- b. What is the proper procedure for refueling?  
Shut the stove down, allow it to cool, and follow the assembly and lighting procedures.
- 

**Review and Summarize Lesson**

<b>ACTION:</b>	Demonstrate proper set-up and use of a mountain dome tent and squad stove
<b>CONDITION:</b>	In a field environment, given a 1 <sup>st</sup> class terrain area, a two-person buddy team, a Mountain Dome tent, squad stove and adequate hardware and fuel
<b>STANDARD:</b>	Demonstrate proper set-up and use of a mountain dome tent and squad stove IAW the NWTC Mountain Operations Manual.

---

**Transition to next lesson**

As per the NWTC training schedule; dependent upon the course in conduct

---

---

**SECTION V****STUDENT EVALUATION**

---

**Testing  
Requirements**

**Students will be tested on this task during the Mountain Stakes portion of training as per the NWTC training schedule for this course.**

---

**Feedback  
Requirement**

**Students will receive two opportunities to pass each event tested. Re-training will be conducted for students that fail the first iteration of testing. Refer to M020 for specifics.**

---